

## Math 157-60 Syllabus

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| <b>DATE:</b>                     | Fall, 2008  |
| <b>COURSE NUMBER:</b>            | MA 157  |
| <b>TITLE:</b>                    | Foundations of Elementary Math I  |
| <b>COURSE COMPASS ID NUMBER:</b> | yeoman58885   |
| <b>CREDIT HOURS:</b>             | Three (3)   |
| <b>PREREQUISITE:</b>             | Math 108 or satisfactory Compass, ACT scores  |
| <b>INSTRUCTOR:</b>               | Robert E. Yeoman  |
| <b>E-MAIL:</b>                   | <a href="mailto:byeoman@lcsc.edu">byeoman@lcsc.edu</a>  |
| <b>TELEPHONE:</b>                | 208.792.2323 (message)  |
| <b>TEXT:</b>                     | <u>Mathematics for Elementary School Teachers</u> , Billstein, Libeskind, Lott; Ninth Edition, 2007 with the bundled MyMathLab. The MyMathLab access package can be purchased separately as it contains the virtual text. |

### **PURPOSE**

The course is designed to acquaint students with various mathematical concepts and prepare them to teach these concepts in an elementary school setting.

### **OVERVIEW**

There are two reasons that distance learning is better for many students: you can learn at your own peak learning time of day and you can learn at your own speed. However, a third reason is that you can form a virtual community in which to interact with others in the class. Mathematics is not learned best in isolation as interaction and communication are essential to learning. Mathematics is a hands-on sport – there is no shortcut to learning the concepts. One must take pencil in hand and work problems, learn and use the problem solving strategies in Chapter 1, and practice additional problems other than those that are assigned. The Course Compass software contains a Discussion Board where students will ask and respond to questions concerning concepts or problems.

### **GENERAL INFORMATION**

- The class is offered through Course Compass ([coursecompass.com](http://coursecompass.com)), not Blackboard. However, the portal to access Course Compass will also be located on the Blackboard site of Warrior Web.
- To access Course Compass, you will purchase a MyMathLab access package. This can be accomplished either at the LCSC bookstore or on the Course Compass website. You now have two options: one of the packages contains the complete virtual text, the access code, and everything you need in multimedia form; the other and recommended option contains the hardback copy of the Billstein text as well as the access code. The second option is suggested because the text will serve as an excellent resource once you're teaching and also if there are other students in your local community with whom you meet to study.
- All chapter examinations are proctored. Go to [www.lcsc.edu/dl](http://www.lcsc.edu/dl) web site for information on finding proctors in your area. Contact the LCSC Distance Learning office (208.792.2323) if you need further assistance.
- A scientific calculator is necessary for homework and tests.

## REQUIREMENTS

- All assignments and assessments must be completed within the time-frame given to receive credit for the activity. Late homework will be accepted for three days for partial credit and then in only extraordinary circumstances.
- Students will access the Math 157 Discussion Forum a minimum of once per week to either respond to questions or pose their own. Please check under Course Documents for rules governing the Forum.
- Students must check their LCMAIL.LCSC.EDU account daily as updates and important information are sent through this medium.
- Students must check ANNOUNCEMENTS on the My Course Compass page often as this is the medium for distributing information about upcoming events.

## COURSE GOALS

The specific goals for all students are:

1. To become a mathematical problem solver
2. To learn to communicate mathematically
3. To learn to reason mathematically
4. To learn to value mathematics
5. To acquire confidence in his/her ability to do mathematics
6. To promote positive regard to mathematics while reducing anxiety and fear

## COURSE OUTLINE:

- I. Problem Solving
- II. Sets, Whole Numbers, and Functions
- III. Numeration Systems and Whole-Number Computation
- IV. Integers and Number Theory
- V. Rational Numbers as Fractions

## METHODS OF INSTRUCTION

Information, techniques, and applications are presented through the distance-learning medium. Homework and practice are fundamental to the learning of mathematics. One cannot learn a skill without regular practice and math is no different. Regular practice is crucial and one will learn best if some time is spent every day working the problems. **Tracked Tutorial Exercises are found under Course Documents** and should be worked before attempting the homework assignment. Also found in this section is a video explanation of various concepts. It is essential that a student reads and studies all the text material leading up to the assignment exercises. Students should not leave a particular homework assignment until they are reasonably certain they understand every problem given. There is an expectation that students work cooperatively on homework to the extent they can by posting and responding to questions on the Discussion Board and exchanging emails. It is necessary that each student has a scientific calculator available for tests and homework. For example, a Texas Instrument Model 30 would be appropriate. However, the calculator may not be used for some of the SKILLS TESTS unless otherwise stated.

## ASSISTANCE

For some students, mathematics brings out their worst fears. Rest assured that support is available in the form of the Discussion Board as already mentioned. Another outstanding resource is Addison-Wesley's **Math Tutor Center** that is staffed by professional math tutors who can help you with what you're studying. Visit the Tutor Center's registration page to sign up. Use your MyMathLab course ID or student access code as your registration number. In

addition, if these areas are not enough to meet your needs, you are welcome and encouraged to e-mail your instructor for further assistance. If you live in the Lewiston area, be sure to take advantage of the Math Lab on the first floor of the MLH Science and Nursing building by the library. You may also want to develop study groups to meet on campus. These groups can be assembled by using the Discussion Forum.

### **METHOD OF EVALUATION**

Students will be evaluated on a combination of proctored chapter exams, skills quizzes, work sheets, Course Compass homework, and a proctored final exam. Points will be assigned to each activity with exams and quizzes worth approximately 65% of the total grade. Everything else will make up the remaining 35% of the weighted grades. Sometimes a final grade will fall between two grades and students ask if the grade will be rounded up to the next higher grade. Course Compass provides each student with a “Study Plan” that presents problems to work in areas the student faired poorly on the homework. The program tracks the number of problems worked, the number correct, and the amount of time spent working these problems. Also available are practice tests. If a student has demonstrated a strong and dedicated effort by working in the Study Plan, the final grade will be rounded up. Grades will be assigned on the following basis: 93 - 100% A, 90 - 92 A-, 86 - 89% B+, 83 - 85 B, 80 - 82% B-, 76 - 79% C+, 73 - 75 C, 70 - 72% C-, 66 - 69% D+, 60 - 65 D.

### **ODDS AND ENDS**

Learning to communicate mathematically is essential for everyone but most importantly for an elementary teacher. Youngsters require solid teaching in numeracy (employment of problem solving strategies, math knowledge, and communication skills) and fundamental skills. The National Council of Teachers of Mathematics (NCTM) is also recommending that teaching of pre-algebra skills begin in the primary grades and that 80 percent of all students complete Algebra 1 by the end of 8<sup>th</sup> grade.. This necessitates that prospective teachers possess algebra proficiency. This class is your initial contact regarding many of these competencies.

On another note, making one’s self readily employable after a college degree is one objective for all the hard work. I highly encourage any of you who have found mathematics interesting to pursue a minor in the field. Mathematics teachers are in short supply and the situation is predicted to worsen. Indeed, some school districts are paying large bonuses for qualified math and science teachers. Contact me for details.